

ANALYTICAL RESULTS

Prepared for:

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

610-431-5733

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425**SAMPLE GROUP**

The sample group for this submittal is 992559. Samples arrived at the laboratory on Wednesday, June 07, 2006. The PO# for this group is SUNOCO PHILLY REFINER.

Client Description**Lancaster Labs Number**

B134D-060606 Grab Water Sample	4788099
URS3-060606 Grab Water Sample	4788100
B133D-060606 Grab Water Sample	4788101
URS2-060606 Grab Water Sample	4788102
U1-060606 Grab Water Sample	4788103
U2-060606 Grab Water Sample	4788104
U4-060606 Grab Water Sample	4788105
U5-060606 Grab Water Sample	4788106
B132D-060606 Grab Water Sample	4788107
URS1-060606 Grab Water Sample	4788108
URS4-060606 Grab Water Sample	4788109
B131-060606 Grab Water Sample	4788110
B164-060606 Grab Water Sample	4788111
URS5-060606 Grab Water Sample	4788112
B125-060606 Grab Water Sample	4788113
B126-060606 Grab Water Sample	4788114

ELECTRONIC SUN: Aquaterra Tech.

COPY TO

Attn: Brad Spancake

ELECTRONIC Langan

COPY TO

Attn: Jason Hanna

ELECTRONIC Langan

Attn: Joseph Catricks

COPY TO

Questions? Contact your Client Services Representative
Rebecca J Shettel at (717) 656-2300

Respectfully Submitted,



Michele J. Smith
Group Leader

Lancaster Laboratories Sample No. WW 4788099
B134D-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 11:55 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B134D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0094	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/20/2006 19:36	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 08:06	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 13:48	Joseph M Gambler	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 18:24	Angela D Sneeringer	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788099**B134D-060606 Grab Water Sample**
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 11:55 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381**B134D**

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 18:24	Angela D Sneeringer	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:34	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4788100

URS3-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 11:40 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

URS3-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0094	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	98.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	260.	25.	5.	ug/l	5
03967	Pyrene	129-00-0	160.	25.	5.	ug/l	5
03971	Chrysene	218-01-9	45.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	18.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	18.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	9.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/15/2006 01:40	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 09:07	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 14:40	Joseph M Gambler	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 21:49	William T Parker	5

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Lancaster Laboratories Sample No. WW 4788100

URS3-060606 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 11:40 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:51

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

URS3-

02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 18:47	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 18:47	Angela D Sneeringer	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:43	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788101

B133D-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 12:10 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B133D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.	106-93-4	< 0.028	0.028	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788101

B133D-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 12:10 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
 Reported: 06/23/2006 at 14:51
 Discard: 07/24/2006

SUN: Aquaterra Tech.
 PO Box 744
 West Chester PA 19381

B133D

CAT		Analysis				Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
06035	Lead	SW-846 6020	1	06/15/2006 01:44	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 10:07	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 15:33	Joseph M Gambler	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 19:09	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 19:09	Angela D Sneeringer	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:43	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788102

URS2-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 12:25 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

URS2-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.	106-93-4	< 0.029	0.029	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	6.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	8.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	11.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	7.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788102

URS2-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 12:25 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
 Reported: 06/23/2006 at 14:51
 Discard: 07/24/2006

SUN: Aquaterra Tech.
 PO Box 744
 West Chester PA 19381

URS2-
CAT

No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
06035	Lead	SW-846 6020	1	06/15/2006 01:49	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 10:37	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 16:26	Joseph M Gambler	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 22:26	Kelly E Brickley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 22:26	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:43	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788103

U1-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 13:00 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

U---1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	60.	50.	10.	ug/l	1
03956	Fluorene	86-73-7	550.	50.	10.	ug/l	1
03963	Phenanthrene	85-01-8	1,100.	50.	10.	ug/l	1
03967	Pyrene	129-00-0	2,600.	250.	50.	ug/l	5
03971	Chrysene	218-01-9	810.	50.	10.	ug/l	1
Due to insufficient sample, the reporting limits for the GC/MS semivolatile compounds were raised.							
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/15/2006 01:54	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 11:37	James H Place	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788103**U1-060606 Grab Water Sample****SUN: Philadelphia Refinery AOI-6**

Collected: 06/06/2006 13:00 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:51

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

U--1

07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 17:18	Joseph M Gambler	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 22:41	William T Parker	5
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 22:49	Kelly E Brickley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 22:49	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:43	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788104

U2-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 12:45 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

U---2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788104

U2-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 12:45 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
 Reported: 06/23/2006 at 14:51
 Discard: 07/24/2006

SUN: Aquaterra Tech.
 PO Box 744
 West Chester PA 19381

U---2

CAT		Analysis				Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
06035	Lead	SW-846 6020	1	06/15/2006 01:58	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 12:07	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 18:11	Joseph M Gambler	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 23:11	Kelly E Brickley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 23:11	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:43	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4788105

U4-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 13:50 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

U---4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/15/2006 02:03	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 01:54	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 19:03	Joseph M Gambler	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 23:34	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788105**U4-060606 Grab Water Sample****SUN: Philadelphia Refinery AOI-6**

Collected: 06/06/2006 13:50 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:51

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

U---4

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 23:34	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/13/2006 19:43	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788106

U5-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 13:30 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:51
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

U---5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	0.0036	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.	106-93-4	< 0.028	0.028	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788106

U5-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 13:30 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
 Reported: 06/23/2006 at 14:51
 Discard: 07/24/2006

SUN: Aquaterra Tech.
 PO Box 744
 West Chester PA 19381

U---5

CAT		Analysis				Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
06035	Lead	SW-846 6020	1	06/19/2006 14:44	Jayme E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 13:08	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/14/2006 23:34	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/08/2006 23:57	Kelly E Brickley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/08/2006 23:57	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788107

B132D-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:15 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B132D

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide The surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.	106-93-4	< 0.029	0.029	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788107

B132D-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:15 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
 Reported: 06/23/2006 at 14:52
 Discard: 07/24/2006

SUN: Aquaterra Tech.
 PO Box 744
 West Chester PA 19381

B132D

CAT		Analysis				Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
06035	Lead	SW-846 6020	1	06/19/2006 14:51	Jayme E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/11/2006 13:38	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 00:26	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 00:20	Kelly E Brickley	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 00:20	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788108

URS1-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:30 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

URS-1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	8.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 14:54	Jayne E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 02:25	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 01:19	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 00:42	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788108**URS1-060606 Grab Water Sample****SUN: Philadelphia Refinery AOI-6**

Collected: 06/06/2006 14:30 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

URS-1

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 00:42	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788109

URS4-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 13:55 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

URS-4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	< 5.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 14:56	Jayne E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 02:55	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 02:12	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 01:05	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Lancaster Laboratories Sample No. WW 4788109

URS4-060606 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 13:55 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

URS-4

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 01:05	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788110

B131-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:10 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B131-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	6.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	17.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 14:58	Jayme E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 03:25	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 03:04	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 01:28	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Lancaster Laboratories Sample No. WW 4788110

B131-060606 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:10 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

B131-

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 01:28	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788111

B164-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:25 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B164-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	0.0050	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	< 5.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	< 5.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	< 5.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	< 5.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	< 5.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	< 5.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	7.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 5.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 20:54	David K Beck	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 03:55	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 03:57	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 01:50	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Lancaster Laboratories Sample No. WW 4788111

B164-060606 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:25 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

B164-

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 01:50	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/18/2006 18:33	James L Mertz	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 2

Lancaster Laboratories Sample No. WW 4788112

URS5-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:35 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

URS5-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.029	0.029	0.0096	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	270.	24.	5.	ug/l	5
03956	Fluorene	86-73-7	17.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	25.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	< 5.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 25.	25.	3.	ug/l	5
05401	Benzene	71-43-2	5,900.	250.	25.	ug/l	50
05402	1,2-Dichloroethane	107-06-2	140.	25.	5.	ug/l	5
05407	Toluene	108-88-3	4,900.	250.	35.	ug/l	50
05415	Ethylbenzene	100-41-4	600.	25.	4.	ug/l	5
05420	Isopropylbenzene	98-82-8	37.	25.	5.	ug/l	5
06310	Xylene (Total)	1330-20-7	2,900.	250.	40.	ug/l	50

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 15:01	Jayne E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 04:25	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 04:49	William T Parker	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 11:28	Joseph M Gambler	5

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Lancaster Laboratories Sample No. WW 4788112

URS5-060606 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:35 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

URS5-

02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 02:13	Kelly E Brickley	5
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 02:35	Kelly E Brickley	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 02:13	Kelly E Brickley	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	06/09/2006 02:35	Kelly E Brickley	50
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788113

B125-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:50 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B125-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0094	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	7.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	17.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	7.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	7.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	73.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	79.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	12.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	10.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	110.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 15:03	Jayne E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 04:56	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 05:41	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 02:58	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories Sample No. WW 4788113**B125-060606 Grab Water Sample****SUN: Philadelphia Refinery AOI-6**

Collected: 06/06/2006 14:50 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

B125-

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 02:58	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

Lancaster Laboratories Sample No. WW 4788114
B126-060606 Grab Water Sample
SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:50 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40
Reported: 06/23/2006 at 14:52
Discard: 07/24/2006

SUN: Aquaterra Tech.
PO Box 744
West Chester PA 19381

B126-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
06035	Lead	7439-92-1	< 0.0010	0.0010	0.000047	mg/l	1
07879	EDB in Wastewater						
01087	Ethylene dibromide	106-93-4	< 0.028	0.028	0.0095	ug/l	1
07805	PAHs in Water by GC/MS						
03947	Naphthalene	91-20-3	23.	5.	1.	ug/l	1
03956	Fluorene	86-73-7	36.	5.	1.	ug/l	1
03963	Phenanthrene	85-01-8	16.	5.	1.	ug/l	1
03967	Pyrene	129-00-0	6.	5.	1.	ug/l	1
03971	Chrysene	218-01-9	< 5.	5.	1.	ug/l	1
02302	UST-Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	< 5.	5.	0.5	ug/l	1
05401	Benzene	71-43-2	220.	5.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	< 5.	5.	1.	ug/l	1
05407	Toluene	108-88-3	61.	5.	0.7	ug/l	1
05415	Ethylbenzene	100-41-4	24.	5.	0.8	ug/l	1
05420	Isopropylbenzene	98-82-8	42.	5.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	110.	5.	0.8	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-037
This sample was filtered in the lab for dissolved metals.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06035	Lead	SW-846 6020	1	06/19/2006 15:05	Jayne E Curet	1
07879	EDB in Wastewater	SW-846 8011	1	06/21/2006 05:26	James H Place	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	06/15/2006 06:34	William T Parker	1
02302	UST-Waters by 8260B	SW-846 8260B	1	06/09/2006 03:21	Kelly E Brickley	1

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 2 of 2

Lancaster Laboratories Sample No. WW 4788114

B126-060606 Grab Water Sample

SUN: Philadelphia Refinery AOI-6

Collected: 06/06/2006 14:50 by MBS

Account Number: 10132

Submitted: 06/07/2006 17:40

SUN: Aquaterra Tech.

Reported: 06/23/2006 at 14:52

PO Box 744

Discard: 07/24/2006

West Chester PA 19381

B126-

01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/09/2006 03:21	Kelly E Brickley	1
06050	ICP/MS SW-846 Water	SW-846 3010A modified	1	06/16/2006 01:45	Helen L Schaeffer	1
07786	EDB Extraction	SW-846 8011	1	06/08/2006 20:30	Kerrie A Greenfield	1
07807	BNA Water Extraction	SW-846 3510C	1	06/08/2006 19:20	Jessica Agosto	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: SUN: Aquaterra Tech.
Reported: 06/23/06 at 02:52 PM

Group Number: 992559

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 061590007A	Sample number(s): 4788099-4788114								
Ethylene dibromide	< 0.030	0.030	0.010	ug/l	100	108	60-140	8	20
Batch number: 06159WAB026	Sample number(s): 4788099-4788114								
Naphthalene	< 5.	5.	1.	ug/l	85	83	70-104	2	30
Fluorene	< 5.	5.	1.	ug/l	92	92	61-116	1	30
Phenanthrene	< 5.	5.	1.	ug/l	87	92	68-111	5	30
Pyrene	< 5.	5.	1.	ug/l	96	99	68-114	4	30
Chrysene	< 5.	5.	1.	ug/l	88	89	70-111	0	30
Batch number: 061646050002A	Sample number(s): 4788099								
Lead	< 0.0010	0.0010	0.00004	mg/l	102		86-115		
			7						
Batch number: 061646050003A	Sample number(s): 4788100-4788105								
Lead	< 0.0010	0.0010	0.00004	mg/l	100		86-115		
			7						
Batch number: 061676050001A	Sample number(s): 4788106-4788110, 4788112-4788114								
Lead	< 0.0010	0.0010	0.00004	mg/l	98		86-115		
			7						
Batch number: 061696050001A	Sample number(s): 4788111								
Lead	< 0.0010	0.0010	0.00004	mg/l	99		86-115		
			7						
Batch number: L061591AA	Sample number(s): 4788099-4788101								
Methyl Tertiary Butyl Ether	< 5.	5.	0.5	ug/l	105	104	73-119	1	30
Benzene	< 5.	5.	0.5	ug/l	114	110	85-117	3	30
1,2-Dichloroethane	< 5.	5.	1.	ug/l	117	115	77-132	2	30
Toluene	< 5.	5.	0.7	ug/l	109	107	85-115	2	30
Ethylbenzene	< 5.	5.	0.8	ug/l	112	109	82-119	3	30
Isopropylbenzene	< 5.	5.	1.	ug/l	110	107	80-120	2	30
Xylene (Total)	< 5.	5.	0.8	ug/l	109	106	83-113	3	30
Batch number: L061592AA	Sample number(s): 4788102-4788114								
Methyl Tertiary Butyl Ether	< 5.	5.	0.5	ug/l	100		73-119		
Benzene	< 5.	5.	0.5	ug/l	111		85-117		
1,2-Dichloroethane	< 5.	5.	1.	ug/l	113		77-132		
Toluene	< 5.	5.	0.7	ug/l	104		85-115		
Ethylbenzene	< 5.	5.	0.8	ug/l	107		82-119		
Isopropylbenzene	< 5.	5.	1.	ug/l	105		80-120		
Xylene (Total)	< 5.	5.	0.8	ug/l	104		83-113		

Sample Matrix Quality Control

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: SUN: Aquaterra Tech.

Group Number: 992559

Reported: 06/23/06 at 02:52 PM

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	BKG MAX	DUP Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 061590007A Ethylene dibromide	48*		65-135			< 0.028	< 0.028	0 (1)	30
Batch number: 061646050002A Lead	114	98	78-120	15	20	< 0.0010	< 0.0010	7 (1)	20
Batch number: 061646050003A Lead	95	95	78-120	0	20	< 0.0010	< 0.0010	3 (1)	20
Batch number: 061676050001A Lead	99	101	78-120	2	20	< 0.0010	< 0.0010	1 (1)	20
Batch number: 061696050001A Lead	97	99	78-120	2	20	< 0.0010	< 0.0010	200* (1)	20
Batch number: L061591AA Methyl Tertiary Butyl Ether	106		69-127						
Benzene	118		83-128						
1,2-Dichloroethane	116		70-143						
Toluene	113		83-127						
Ethylbenzene	114		82-129						
Isopropylbenzene	113		81-130						
Xylene (Total)	112		82-130						
Batch number: L061592AA Methyl Tertiary Butyl Ether	(2)	(2)	69-127	1	30				
Benzene	122	125	83-128	3	30				
1,2-Dichloroethane	119	121	70-143	2	30				
Toluene	113	116	83-127	3	30				
Ethylbenzene	114	117	82-129	3	30				
Isopropylbenzene	115	119	81-130	4	30				
Xylene (Total)	113	117	82-130	3	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EDB in Wastewater

Batch number: 061590007A

1,1,2,2-

Tetrachloroethane

4788099	55
4788100	60
4788101	51*
4788102	11*
4788103	16*
4788104	47*
4788105	87

*- Outside of specification

**-This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: SUN: Aquaterra Tech.
Reported: 06/23/06 at 02:52 PM

Group Number: 992559

Surrogate Quality Control

4788106 41*
4788107 49*
4788108 99
4788109 82
4788110 68
4788111 72
4788112 89
4788113 125*
4788114 114
Blank 116
DUP 32*
LCS 117
LCSD 129*
MS 42*

Limits: 52-120

Analysis Name: PAHs in Water by GC/MS
Batch number: 06159WAB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4788099	81	84	99
4788100	80	92	89
4788101	89	90	100
4788102	90	91	100
4788103	106	88	101
4788104	96	90	100
4788105	89	90	101
4788106	92	89	96
4788107	92	85	101
4788108	92	90	99
4788109	86	84	90
4788110	88	91	102
4788111	91	87	100
4788112	89	76	98
4788113	93	87	97
4788114	92	86	97
Blank	85	84	96
LCS	93	92	105
LCSD	89	93	106

Limits: 51-123 64-112 52-151

Analysis Name: UST-Waters by 8260B
Batch number: L061591AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4788099	93	90	90	82
4788100	91	89	89	84
4788101	93	90	89	81
Blank	93	89	91	81
LCS	92	92	93	85
LCSD	91	90	92	85
MS	93	89	91	83

Limits: 80-116 77-113 80-113 78-113

Analysis Name: UST-Waters by 8260B

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: SUN: Aquaterra Tech.
Reported: 06/23/06 at 02:52 PM

Group Number: 992559

Surrogate Quality Control

Batch number: L061592AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4788102	92	88	90	84
4788103	92	89	91	88
4788104	94	90	88	82
4788105	93	89	88	82
4788106	92	89	89	83
4788107	93	91	88	82
4788108	95	90	88	81
4788109	94	90	89	82
4788110	92	90	89	86
4788111	92	89	92	83
4788112	92	88	88	86
4788113	93	89	87	83
4788114	93	89	89	84
Blank	93	91	89	82
LCS	92	90	91	86
MS	94	93	89	84
MSD	94	91	89	84
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

COC # 0124053

Acct. # 10132 Group# 992554 Sample # 4288099-115

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Sun Aquatronics/Langan</u> Acct. #: _____ Project Name#: <u>Sun-Philadelphia Refinery AOT-6</u> PWSID #: _____ Project Manager: <u>B. Sparacke</u> J. Hanna P.O.#: _____ Sampler: <u>M. B. Sparacke + M. Hinderling</u> Quote #: _____ Name of state where samples were collected: <u>PA</u>		2		3		4		5		6					
B134D-060606 URS3-060606 B133D-060606 URS2-060606 U1-060606 U2-060606 U4-060606 U5-060606 B132D-060606 URS1-060606		6/6/06 6/6/06 6/6/06 6/6/06 6/6/06 6/6/06 6/6/06 6/6/06 6/6/06		1155 1140 1210 1225 1300 1245 1350 1330 1415 1430		X X X X X X X X X		X X X X X X X X X		8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX 8200 P4UG BTEX		8011 EDB 6020 Dissolved Pb Chrysene Fluorene Phenanthrene, Pyrene		Remarks Please provide EQA's EDD Dissolved Pb are unfiltered/unpreserved L4-4996	
7 Turnaround Time Requested (TAT) (please circle): <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): _____ Phone _____ Fax _____ E-mail _____ Phone #: _____ Fax #: _____ E-mail address: _____		8 Data Package Options (please circle if required) QC Summary Type VI (Raw Data) <u>Yes</u> No Type I (Tier I) GLP <u>Yes</u> No Type II (Tier II) Other <u>Yes</u> No Type III (NJ Red. Del.) <u>Yes</u> No Type IV (CLP) <u>Yes</u> No Site-specific QC required <u>Yes</u> No (if yes, indicate QC sample and submit triplicate volume.) Internal Chain of Custody required? <u>Yes</u> No		9 Relinquished by: <u>M. B. Sparacke</u> Date: <u>6/6/06</u> Time: <u>1000</u> Relinquished by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>930</u> Relinquished by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>930</u> Relinquished by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>17:40</u> Relinquished by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>17:40</u>		Received by: <u>Agustine Fridge</u> Date: <u>6/6/06</u> Time: <u>1000</u> Received by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>930</u> Received by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>930</u> Received by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>17:40</u> Received by: <u>AT P4UG</u> Date: <u>6/7/06</u> Time: <u>17:40</u>									

Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # 10132 Group # 992559 Sample # 4288999-115 **COC #** 0124054

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>Sun Aquaterra / Langan</u> Acct. #: _____ Project Name: <u>Sun-Philadelphia Refinery, ATJ-GLWSID #:</u> _____ Project Manager: <u>B. Spawcke / J. Hanna</u> P.O. #: _____ Sampler: <u>M.B. Spawcke / M. Hinderling</u> Quote #: _____ Name of state where samples were collected: <u>PA</u>		2		3		4		5		6			
URS 4 - 060606 B131 - 060606 B114 - 060606 URS 5 - 060606 B125 - 060606 B126 - 060606 TRIP BLANK		1355 1410 1425 1435 1450 1450		6/6/06 6/6/06 6/6/06 6/6/06 6/6/06 6/6/06		X X X X X X		8260 PAUG 1,2-dichloroethane 8260 Dissolved Pb Chrysene, Fluorene Phenanthrene Pyrene		8260 EDB 8260 Dissolved Pb Chrysene, Fluorene Phenanthrene Pyrene			
Remarks: Please provide 200us EDD Dissolved Pb are unfiltered/unpreserved 1.4-4.4°C													
7 Turnaround Time Requested (TAT) (please circle): Normal <u>Rush</u> (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____		Relinquished by: <u>M. B. Spawcke</u> Relinquished by: <u>AT PUDGE</u> Relinquished by: <u>John Hinderling</u> Relinquished by: <u>Mosier M. Hanna</u>		Date: <u>6/6/06</u> Date: <u>6/7/06</u> Date: <u>6/7/06</u> Date: <u>6/7/06</u>		Time: <u>1000</u> Time: <u>0930</u> Time: <u>0930</u> Time: <u>1740</u>		Received by: <u>Aquaterra, Frisco</u> Received by: <u>John Hinderling</u> Received by: <u>Mosier M. Hanna</u> Received by: _____		Date: <u>6/6/06</u> Date: <u>6/7/06</u> Date: <u>6/7/06</u> Date: <u>6/7/06</u>		Time: <u>1000</u> Time: <u>0930</u> Time: <u>0930</u> Time: <u>1740</u>	
8 Data Package Options (please circle if required) QC Summary Type VI (Raw Data) Yes <u>No</u> Type I (Tier I) GLP Site-specific QC required? Yes <u>No</u> Type II (Tier II) Other (if yes, indicate QC sample and submit triplicate volume.) Type III (NJ Red. Del.) Internal Chain of Custody required? Yes <u>No</u> Type IV (CLP)													

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.